Digital Government Academy Course:
Enterprise Content Management

Presented by Interwoven, Inc, for the State of Washington

Today's Agenda

- Today we'll continue our exploration of Enterprise Content Management in the State of Washington
- Today's topics:
  - **Designing Data Capture Forms**
  - Designing Presentation Templates
  - Re-use via Templating

- **Objectives:**
  - Data capture form concepts
  - Data capture template design issues
  - Data capture template best practices
- **Action planning:**
  - Developing a prototype cross-agency "universal" press release data capture form design

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  - Identifying issues that will impact the design of a unified press release architecture for cross-agency use

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  - **Re-use via Templating**

- **Objectives:**
  - Re-use in DCTs
  - Re-use in PTs
  - Re-use in output products
  - Template access and control
- **Action planning:**
  - Planning for re-use of template assets across agencies

Seminar Schedule

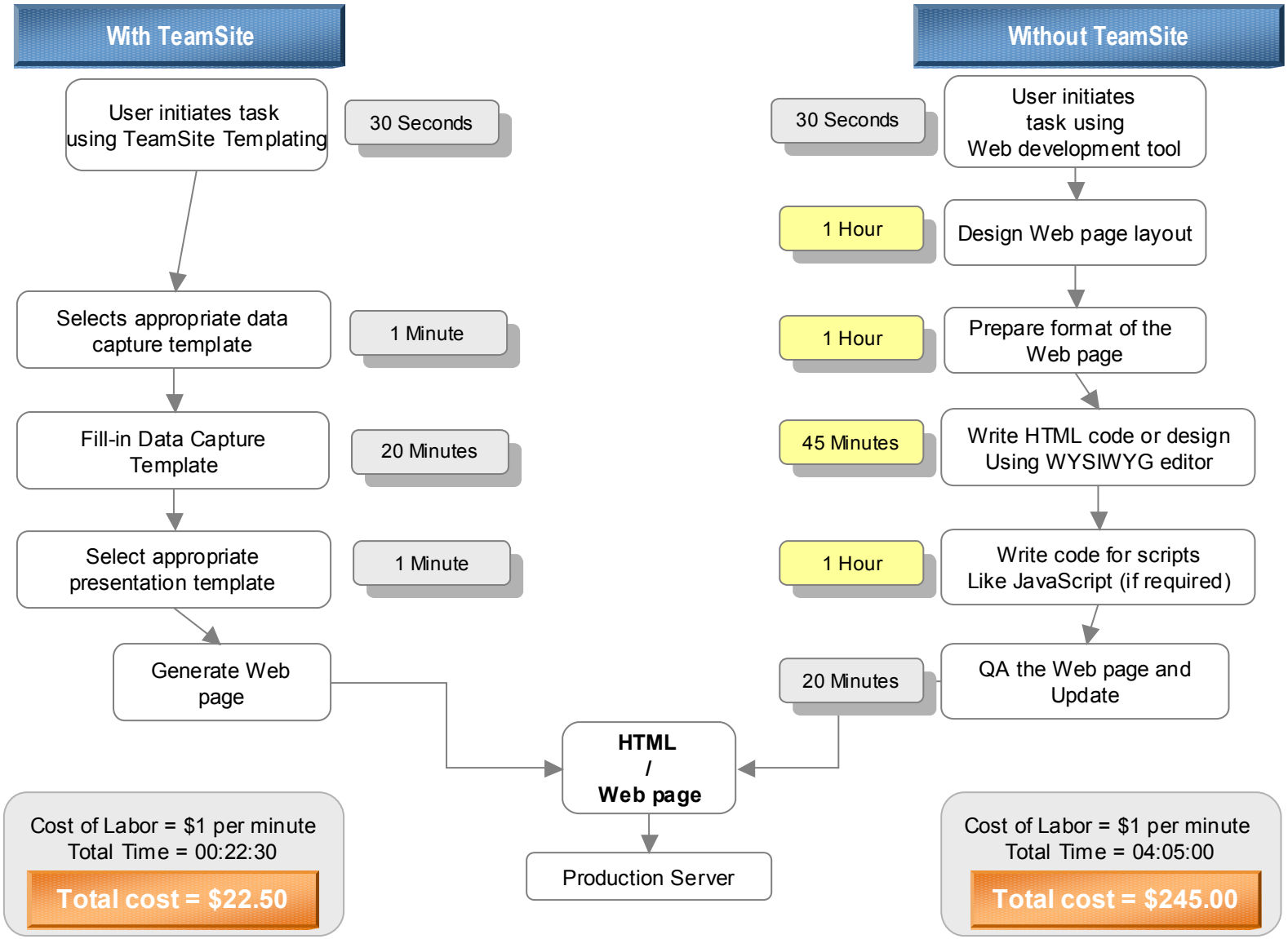
- Day 1: December 4, 2002
  - Course Kickoff
  - ECM
  - TeamSite Templating
- Day 2: December 11, 2002
  - Develop-and-Deploy
  - TeamSite in the Enterprise
  - Branching Structures
- Day 3: December 18, 2002
  - TeamSite Security
  - Workflow Scenarios
  - Designing a Workflow
- **Day 4: January 8, 2003**
  - Designing Data Capture Forms
  - Designing Presentation Templates
  - Re-use via Templating
- **Day 5: January 15, 2003**
  - TeamSite and Metadata
  - Finding your Assets
  - Supporting Personalization
  - Course Summary

Designing Template Data Capture Forms

Topic Objectives

- In this topic, we'll cover:
  - Data capture form concepts
  - Data capture template design issues
  - Data capture template best practices
- The action planning at the end of this topic will be:
  - Developing a prototype cross-agency "universal" press release data capture form design

Process Improvement with Templating (Existing Formats)



Data Capture Design: Requirements

- A primary value of templating is that it enables line-of-business users to accomplish web publishing without the support of web development specialists
- Before you create your data capture forms, consider who will be using them:
  - Keep them simple
  - Use standard terms and labels
  - Identify all fields clearly
  - Make them simple to use
  - Focus on data input, not publishing
- Remember that a single data capture form can save records that can be used to create many different output products

Data Capture Forms

- Each template data type has one **data capture form**, which is used to enter or edit the data for a content element on a web page or other content publication medium
- TeamSite Templating displays a data capture form by reading and executing the commands in a **data capture template**, or **DCT**
- A DCT is primarily composed of **items**, each of which represents one atomic piece of information that collectively represent a complete record
- When saved, the information entered into a data capture form creates a **Data Content Record** or **DCR**
- A good data capture form is simple and easy to use

Items: Best Practices

- What makes a good item?
  - Clear labels and descriptions
  - Don't combine values in single items
  - Easy to enter data—preferably without typing if possible
  - Organized with most important/frequently-used items at top, optional items below
  - Grouped by topic, using **`containers`** or **`replicants`**
  - Good validation rules that are explained in the item description
  - Minimal internal formatting, such as Visual Format, etc
  - Not all the items on a DCT necessarily need to be used in all output documents

Initial Analysis

- Print out a copy of a sample document that you want to generate by templating
- Mark all the elements of the document that are **dynamic**, that is, that change for each new document
  - The rest of the document is **static**, and will become the background content generated by the presentation template
- Give each element a name—it will become an item on the data capture form
- Consider groupings as units
  - These can become **containers**
- Look for lists of items that may be longer or shorter on each document
  - These will become **replicants**
- Analyze ***all*** of the output products that will be generated from this data capture form

Metadata Analysis

- You may want to store additional information with the record
- This information might not be displayed in the output, but is used by automated systems such as search, categorization, and publishing:
  - Location (i.e., where to put output on web site)
  - Expiration data
  - Author statistics
  - Abstract (for search engine)
  - Language/locale information
- These can also become items on the data entry form, or can be attached to the DCR as TeamSite Metadata

Other Design Issues

- Make the data capture form as simple to use as possible by automatically generating as much of the content as is practical
- Examples:
  - Date/time of record creation
  - Current user name
  - Content stored in a database
- These can be either:
  - Inserted into the DCR via FormAPI code or a callout
  - Inserted into the output via presentation script code during generation

DCT Items and Instances

- An item on a data capture form can be represented by one of several data entry controls, called **instances**
  - Text and textareas (including Visual Format)
  - Radio buttons and check boxes
  - Select drop-down and multi-select list boxes
  - File path selector browsers
- Each instance type can be contained inside a **container** or a **replicant**, which are also instance types
- Use text and textarea only if needed—the other types provide faster and more valid input by the user
- There are callouts available for tasks like date selection, table input, etc
  - You can find these on http://devnet.interwoven.com

Visual Format: Best Practices

- An optional feature of a textarea instance
- Advantages
  - Spell checking
  - Permits user to format content
- Disadvantages
  - If user embeds complex format into the content, it is harder to change the format if needed
- Guidelines
  - Use Visual Format to provide spell checking and ***micro*** formatting, such as paragraph, bold, italics and/or underline
  - Allow other formatting only if absolutely necessary
  - Turn off/disable other Visual Format features (see TeamSite Templating documentation)

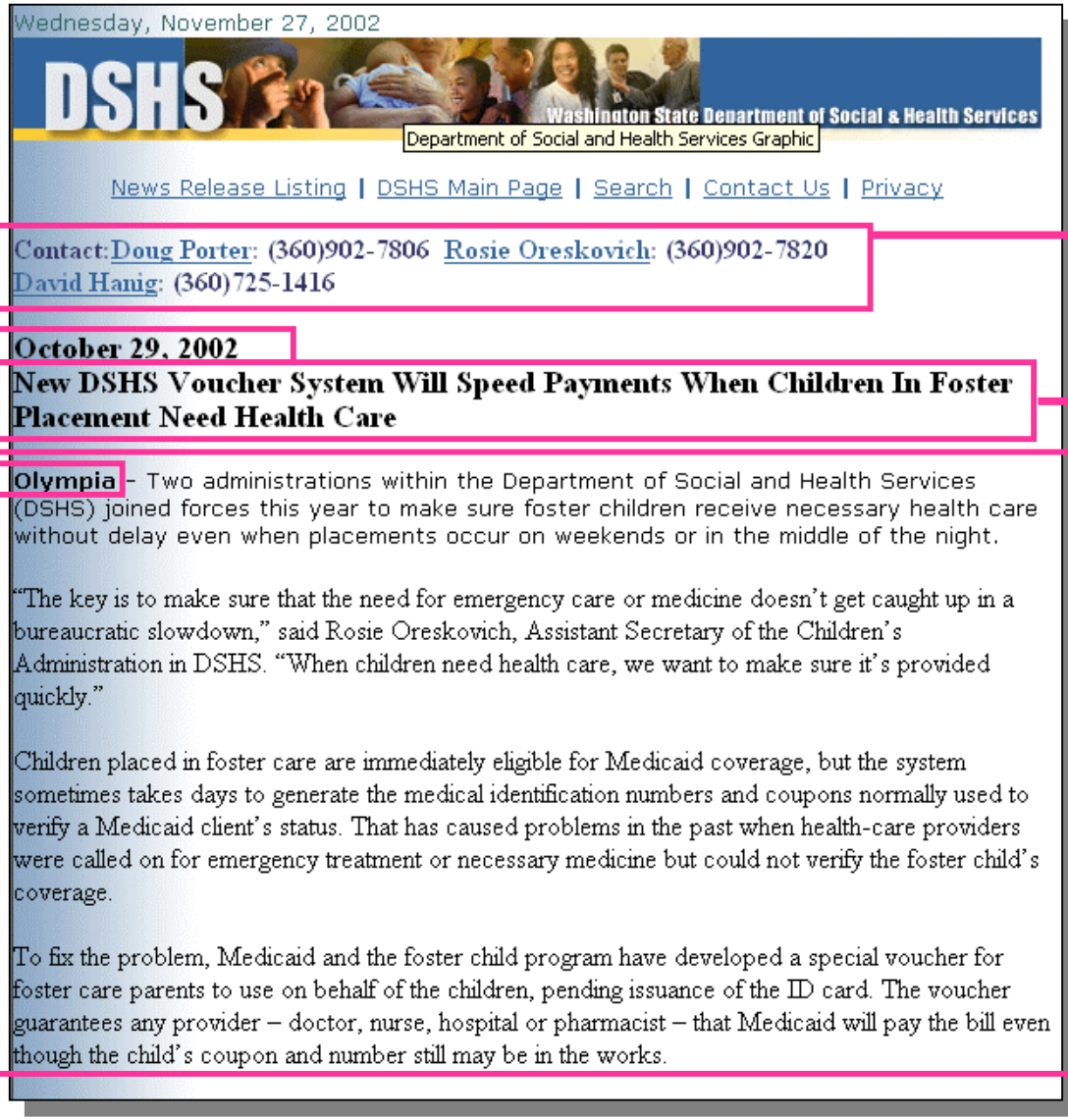
Action Exercise: Data Capture Template Design

- Within your group, spend 20 minutes discussing the following:
  - In light of this topic's new material, evaluate your version of the DSHS press release
  - Examine some of your sample content print-outs and consider what changes may need to be made to the DSHS example to make it a general-purpose press release form
- After discussion, spend 30 minutes documenting the following:
  - Design (on paper) the ideal cross-agency Press Release data capture form
- Each group will then present their findings to the class one at a time

Action Item Discussion

- Class presentation
- Questions
- Take a few minutes to consider other group action items
  - Integrate theirs with yours if needed

Example: Press Release Item Analysis



Wednesday, November 27, 2002

DSHS

Washington State Department of Social & Health Services

Department of Social and Health Services Graphic

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Contact: Doug Porter: (360)902-7806 Rosie Oreskovich: (360)902-7820
David Hanig: (360)725-1416

October 29, 2002

New DSHS Voucher System Will Speed Payments When Children In Foster Placement Need Health Care

Olympia - Two administrations within the Department of Social and Health Services (DSHS) joined forces this year to make sure foster children receive necessary health care without delay even when placements occur on weekends or in the middle of the night.

"The key is to make sure that the need for emergency care or medicine doesn't get caught up in a bureaucratic slowdown," said Rosie Oreskovich, Assistant Secretary of the Children's Administration in DSHS. "When children need health care, we want to make sure it's provided quickly."

Children placed in foster care are immediately eligible for Medicaid coverage, but the system sometimes takes days to generate the medical identification numbers and coupons normally used to verify a Medicaid client's status. That has caused problems in the past when health-care providers were called on for emergency treatment or necessary medicine but could not verify the foster child's coverage.

To fix the problem, Medicaid and the foster child program have developed a special voucher for foster care parents to use on behalf of the children, pending issuance of the ID card. The voucher guarantees any provider – doctor, nurse, hospital or pharmacist – that Medicaid will pay the bill even though the child's coupon and number still may be in the works.

Contacts (list)

Date

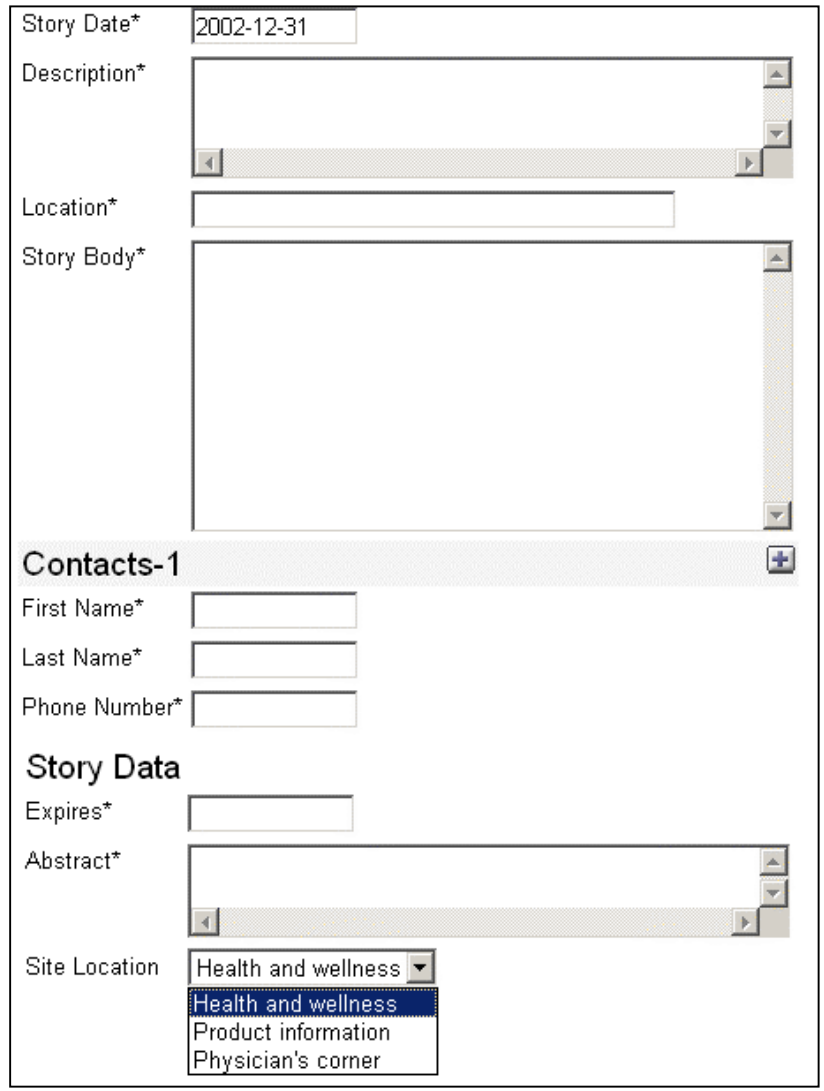
Description

Location

Story

Example: Press Release Data Capture Form

- The story date is automatically generated
- Common fields are towards the top
- The body is a simple textarea, but could be a Visual Format instance if formatting is desired
- The **Contacts** area is a replicant
- The **Story Data** area is a container for the metadata



Designing Presentation Templates

Topic Objectives

- In this topic, we'll cover:
  - Presentation template concepts
  - Presentation template design
- The action planning at the end of this topic will be:
  - Identifying issues that will impact the design of a unified press release architecture for cross-agency use

Presentation Template Concepts

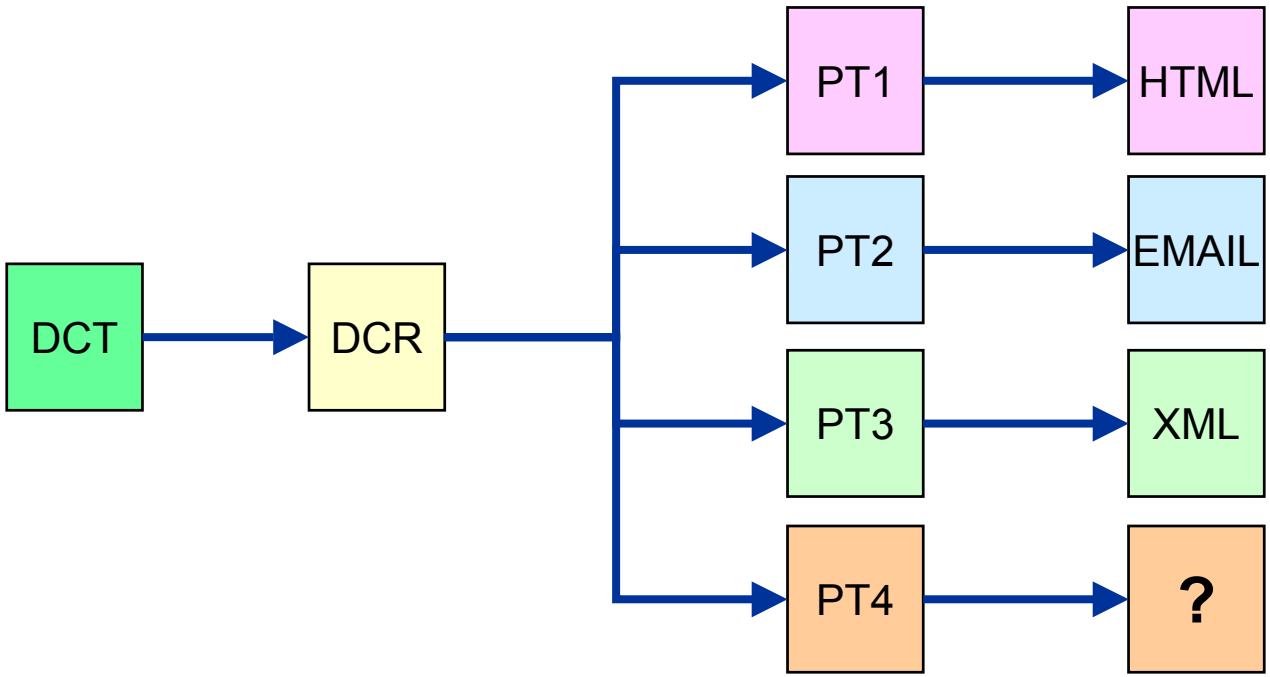
- A presentation template (**PT**) for a website is generally an HTML file that is a framework for a type of file
- It typically contains:
  - Background and header
  - Style sheet information
  - Other static non-changing content (menus, banners, JavaScript, etc)
  - **Placeholders for dynamic content**
  - **Generation scripts**
- The placeholders are PT "iw" tags, such as **`iw_value`**, **`iw_include`**, **`iw_iterate`**, etc.
- The generation scripts can also automatically insert dynamic content
- When **compiled**, the PT generates an output file, which can then be deployed to the website

PT Compilation

- Compilation happens when a PT and a DCR are used in a **generate** command
  - On demand, from the TeamSite user interface
  - Via an automated script that calls **iwgen**, from a workflow or trigger event
- During compilation, the data in the DCR is inserted into a copy of the PT, and the PT scripts are executed
- The generated output file contains no templating tags—it is a normal file
- Any text file type can be generated in this way—HTML, JSP, XML, WML, and email messages are a few examples

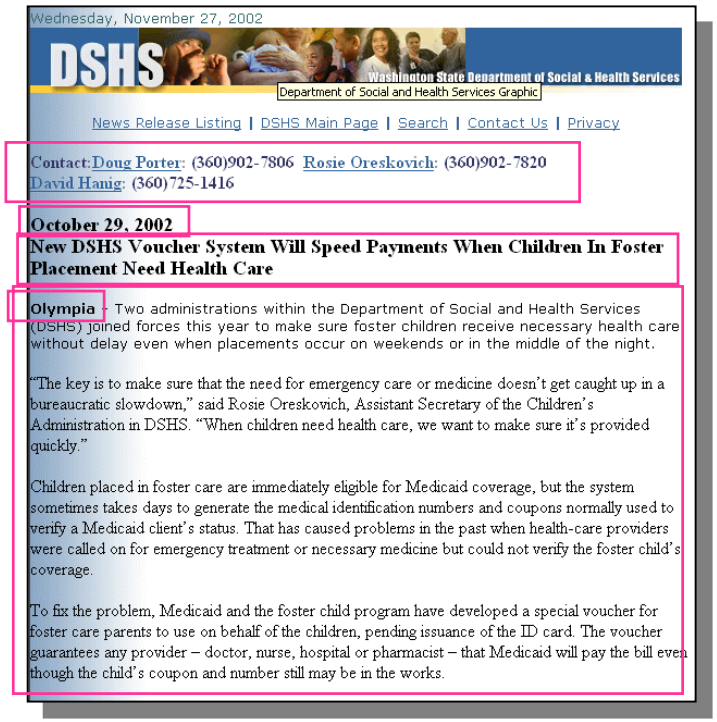
Multiple PTs for a Template Type

- A single template type (such as a press release) can have multiple different PTs, each generating a different type of document from the same source data in the DCR



Presentation Template Design

- Start with a sample document (like the one you used for DCT design)
- Identify the elements that change in each new copy of the document type, v the elements that stay the same
  - The static elements will become the body of the PT
  - The dynamic elements will be inserted via "iw" tags during generation from items in a DCR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- Match up each of the dynamic elements with one or more of the items in the source DCR
- Delete the sample dynamic elements and replace them with "iw" tags that will insert the correct content from the DCR

PT Iteration Looping

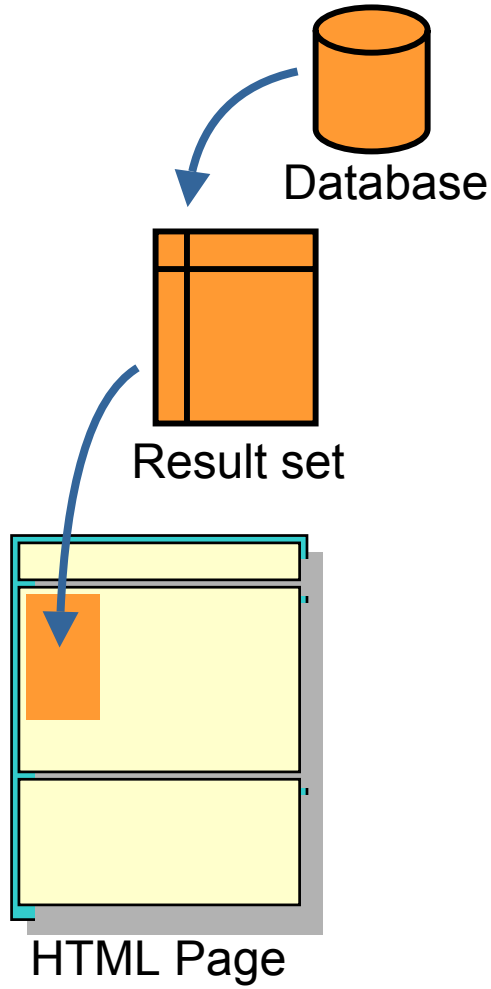
- Wherever you have a **replicant** in the source DCT, you will need an **iw_iterate** in the PT
- **iw_iterate** loops through each of the values contained in the list of items in the replicant
- Typically, each iteration step will emit a table row, list item or a paragraph into the output HTML stream
- You must also use an iteration loop to handle a multi-select list item or checkbox item

PT Scripting

- In addition to simply inserting content directly from a source DCR, you can add PT scripting to a presentation template
- PT scripts execute at generation time, and can insert content into the output stream automatically
- You can also change source DCRs and change the file path of the output stream
- Examples:
  - Automatically generate an index table of contents
  - Generate the same PT more than once, in multiple encoding formats
  - Modify link paths
  - Process raw data from the DCR before insertion

Presentation Template Database Access

- TeamSite PTs can access databases directly and retrieve information to be inserted into the generated file
  - This can be in addition to or in place of information from a DCR
- Any of several database vendors are supported
  - Oracle, Microsoft SQL Server, Microsoft Access, mSQL, Informix, etc
  - On Windows, any ODBC data source
- No special configuration in TeamSite is required



Automating Generation

- Manual generation of output is good for testing, but unsuitable for production
  - Users may not choose the right PTs, or won't know naming conventions or proper output paths
  - There may be simply too many files to generate for a person to be able to manually control the process
- When a user saves a new DCR, a workflow process can be triggered
  - Generation of the output can be part of the workflow, along with review, submission and deployment, if desired
- Other automation options exist as well
  - Trigger scripts, timed events, etc.

Regeneration

- A file created by templating needs to be regenerated if:
  - The source DCR changes
  - The source PT changes
- The user is prompted to regenerate when saving a changed source DCR
- You can also use a script that regenerates all templating-created pages before deployment

DCT and PT Dependencies

- A PT is dependent on the design of the template type's DCT
- If the item names in the DCT change, or if the structure (ie, replicant/container layout) changes, the PT will no longer compile correctly
- It is safe to **add** new items, but renaming or deleting existing items in the DCT will make the DCRs it creates incompatible with existing PTs
- Bear in mind that you can leave the existing PT as is, and create new PTs to use with the new DCRs if needed
- You could also create a PT that takes old-style DCRs and saves them again in the new format!

Action Exercise: Presentation Template Design

- Within your group, spend 20 minutes discussing the following:
  - What PTs will be needed to generate press releases for all the agencies?
  - What parts of the PTs are the same, and which are different?
  - What items are used in all press releases, and which are unique to one or a few types?
- After discussion, spend 20 minutes documenting the following:
  - The common items for use by all press releases
  - The unique or uncommon items
- Each group will then present their findings to the class one at a time

Action Item Discussion

- Class presentation
- Questions
- Take a few minutes to consider other group action items
  - Integrate theirs with yours if needed

Re-Use Via Templating

Topic Objectives

- In this topic, we'll cover:
  - Re-use in DCTs
  - Re-use in PTs
  - Re-use in output products
  - Template access and control
- The action planning at the end of this topic will be:
  - Planning for re-use of template assets across agencies

Reuse and Templating

- Reuse can be applied in three areas in templating:
  - Common DCT features
  - Common PT features
  - Common features in generated products
- Additionally, we'll discuss issues pertaining to template access and control across agencies in the state government

DCT Reuse Issues

- The data capture forms for several different template types might have internal elements that are identical
- Examples:
  - Validation code
  - Metadata containers
- An excellent means of supporting re-use in DCTs is to store the common content in a separate file, and "include" it using an **<inline>** directive in the DCT
- Multiple DCTs can thus use common code as needed
- The DCT **<script>** element also supports external files
- Using either method, you can share common code between DCTs in the same or in different branches

Presentation Template Reuse Issues

- PTs can also re-use content from other files by using **component templates**
- A component template is a separate file, containing PT tags and static content, which can be inserted into a "master" PT at generation time
- Use this to create standardized, reusable subsections of PTs, which can include PT script code or any other PT feature
- The "master" PT can pass arguments to the component PT when it is envoked
- The component PTs can be stored in the same or in different branches

Reuse in Output Products

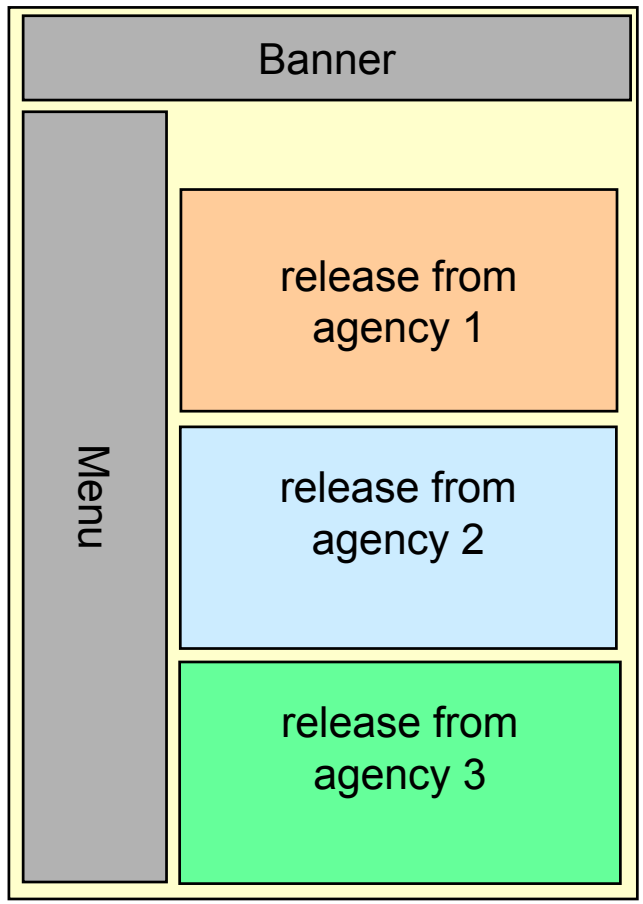
- Many of your generated pages may include common content
- This content may be dynamic or static
- Static examples:
  - Banners, footers, legal text
- Dynamic examples:
  - Menus, indexes, tables of content
- Your PTs can use the **`iw_include`** tag to insert standard content from a source file into the output stream
- The source files can be maintained in the same or different branches, and can be versioned independently
- Changes to the source files will take effect immediately on all new generated files
- Note that this can reduce or eliminate the need for SSI on your web servers

Reusing DCRs

- Once created, a DCR can be used in one or more PTs
- The **`iw_load_dcr`** PT tag can load a DCR and use it even from another branch
- Thus, when a PT is being compiled and output is being generated, the output can include content coming from more than one DCR, from more than one branch, simultaneously
- A single output document can thus be the composite of several DCRs

Example: Composite PT for a "Latest News" Page

- A PT could use **iw_load_dcr** to load each of the 3 newest DCRs from 3 different press release templates in 3 different agency branches
- It could then use 3 component templates (one designed for each of the other press release types) to generate a snapshot story for the 3 press releases: date, description, and first 6 lines of the story, plus a link to the full story



Template Access and Control

- Your branch design must take templating into account
- A common branch for shared template content is potentially useful
- **<iw_include>**, **<inline>** and **<iw_load_dcr>** can all be used to access files in other branches
  - Should this be one common branch, or will agencies allow others to access their branch?
- Note that if other agencies have read access to your branch, but no workarea access, then they can re-use your content but can't change anything

Templating Permissions

- Within a workarea, templating operates within a sub-directory named **`templatedata`**
- All users who will fill in data capture templates must have read/write access to all sub-directories in this directory path

Action Exercise: Planning for Template Re-Use

- Within your group, spend 20 minutes discussing the following:
  - What DCT re-use options can you predict?
  - What PT re-use options can you predict?
  - What output re-use options can you predict?
  - What cross-agency re-use needs do you have?
- After discussion, spend 20 minutes documenting the following:
  - Your top 6 re-use priorities
  - For each priority item, a short description of a possible implementation plan: ie, how do you think you can handle it?
- Each group will then present their findings to the class one at a time

Action Item Discussion

- Class presentation
- Questions
- Take a few minutes to consider other group action items
  - Integrate theirs with yours if needed

End of Session

- This concludes today's session
- Next session: **January 15, 2003**
  - TeamSite and Metadata
  - Finding your Assets
  - Supporting Personalization
  - Course Summary